

WHAT IS CLAIMED IS:

1. A system for monitoring, reporting and diagnosing fault information of a vehicle on a real time basis both within the vehicle and outside of the vehicle, comprising:
  - a quick access recorder that records the fault information;
  - a portable hardware that is removable from the vehicle and diagnoses the fault information;
  - an onboard data communication network that communicates information between the quick access recorder and the portable hardware; and
  - a data transmitting device for transmitting the fault information and diagnosis in real-time between the vehicle location and a receiver in another location.
2. The system according to claim 1, wherein the quick access recorder further comprises recording line replacement units to determine indication of legitimate faults.
3. The system according to claim 3, wherein the line replacement units are removable for further diagnostic.
4. The system according to claim 1, wherein the removable, portable hardware is an Electronic Flight Bag that hosts a suite of applications for monitoring and reporting faults in the system.
5. The system according to claim 4, wherein the suite of applications performs real-time monitoring and analysis of data received from the quick access recorder.
6. The system according to claim 5, wherein the suite of applications utilizes the on board data communications network to transmit notification messages to a crew displayed on the Electronic Flight Bag.
7. The system according to claim 5, wherein the suite of applications utilizes the air-ground data transmitting device to transmit notification messages to maintenance personnel and airline host computer systems on the ground.
8. The system according to claim 1, wherein the onboard data communication network is a data bus that enables exchange of information other than fault information.
9. The system according to claim 1, wherein the air-to-ground transmitting device further comprising an air-ground antenna.
10. The system according to claim 1, wherein the vehicle is an aircraft.
11. A method for monitoring, reporting and diagnosing fault information of a vehicle on a real-time basis both within the vehicle and outside the vehicle, the method comprising:

recording the fault information on a quick access recorder;  
storing the fault information on a portable hardware, the portable hardware is removable;

communicating the information on the quick access recorder and the portable hardware through an onboard data communication network; and

transmitting the fault information in real-time between the vehicle location and a receiver in another location by an air-ground data transmitting device

12. The method according to claim 11, wherein the transmitting step utilizes the on board data communications network to transmit information to a flight crew for displaying on the Electronic Flight Bag.

13. The method according to claim 11, wherein the transmitting step utilizes the air-ground data transmitting device to transmit information to a maintenance personnel on the ground.

14. The method according to claim 11, further comprising interfacing with a flight crew for in-flight corrective action.

15. The method according to claim 11, further comprising notifying a maintenance personnel for corrective action when the vehicle is grounded.

16. The method according to claim 11, wherein the removable, portable hardware is an Electronic Flight Bag, the Electronic Flight Bag hosts a suite of applications for monitoring and reporting faults in the system.

17. The method according to claim 16, wherein the suite of applications performs real-time monitoring and analysis of data received from the quick access recorder.

18. The method according to claim 11, further comprising connecting air-ground data transmitting device to an air-ground antenna or on board 802.11 antenna for ground – ground communications as appropriate

19. The method according to claim 11, wherein the vehicle is an aircraft.